

## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION  
(PCT Rule 61.2)

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 14 May 2001 (14.05.01)	Applicant's or agent's file reference 102035-200
International application No. PCT/US00/18423	Priority date (day/month/year) 06 July 1999 (06.07.99)
International filing date (day/month/year) 05 July 2000 (05.07.00)	
Applicant OUSTERHOUT, John, N. et al	

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

06 February 2001 (06.02.01)

in a notice effecting later election filed with the International Bureau on:

\_\_\_\_\_

2. The election  was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Claudio Borton Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

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NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

Date of mailing (day/month/year) 29 October 2001 (29.10.01)		To:  SLATE, William, B. Wiggin & Dana One Century Tower New Haven, CT 06508-1832 ETATS-UNIS D'AMERIQUE
Applicant's or agent's file reference 102035-200		<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/US00/18423	International filing date (day/month/year) 05 July 2000 (05.07.00)	
International publication date (day/month/year) 11 January 2001 (11.01.01)	Priority date (day/month/year) 06 July 1999 (06.07.99)	
Applicant PRIMEX TECHNOLOGIES, INC. et al		

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
06 July 1999 (06.07.99)	60/142,365	US	04 Octo 2001 (04.10.01)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  Khemais BRAHMI  Telephone No. (41-22) 338.83.38
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REPLACED BY  
ART 34 AMDT

PATENT COOPERATION TREATY

PCT

REC'D 25 SEP 2001  
WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14

Applicant's or agent's file reference 102035-200	FOR FURTHER ACTION      See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/18423	International filing date (day/month/year) 05 July 2000 (05.07.2000)	Priority date (day/month/year) 06 July 1999 (06.07.1999)
International Patent Classification (IPC) or national classification and IPC IPC(7): E01F 13/00, 15/00; E04H 17/00; E06B 11/00 and US Cl.: 404/6; 256/1, 13.1		
Applicant PRIMEX TECHNOLOGIES, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 06 February 2001 (06.02.2001)	Date of completion of this report 05 September 2001 (05.09.2001)
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer  Gary Hartmann Telephone No. 703-305-4549

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/18423

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- the international application as originally filed.

the description:

pages 1-7 as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.

the claims:

pages 8-11 as originally filed  
 pages NONE, as amended (together with any statement) under Article 19  
 pages NONE, filed with the demand  
 pages 8, filed with the letter of 27 July 2001 (27.07.2001).

the drawings:

pages 1-2, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.

the sequence listing part of the description:

pages NONE, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_.

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in printed form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

- the description, pages NONE  
 the claims, Nos. NONE  
 the drawings, sheets/fig NONE

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US00/18423**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims 1-12	YES
	Claims 13-16	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-16	NO
Industrial Applicability (IA)	Claims 1-16	YES
	Claims NONE	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 13-16 lack novelty under PCT Article 33(2) as being anticipated by either Schultz (U.S. Patent 2,465,936) or Cotton (U.S. Patent 2,440,574). Regarding claims 14-16, note that impact with the vehicle alters the parallel orientation; thereby meeting claim recitations.

Claims 1-12 lack an inventive step under PCT Article 33(3) as being obvious over Marcotullio et al. (U.S. Patents 5,829,912 and 5,993,104) in view of either Schultz (U.S. Patent 2,465,936) or Cotton (U.S. Patent 2,440,574). Marcotullio et al. disclose a device comprising support members (14, 16); a flexible barrier (20) extending at least partially therebetween; upper and lower barrier members (Figure 11, for example); and a plurality of linking members (Figure 4, for example). It would have been obvious to have utilized the gaps of either Schultz or Cotton with the barrier of Marcotullio et al. in order to form an apparatus not having an underground undeployed condition.

----- NEW CITATIONS ----- □

## CLAIMS

We Claim:

1. A device for capturing a target vehicle travelling along a pathway, comprising:  
first and second support members (70A, 70B);  
a flexible barrier (20) which, with the device in at least a deployed condition, is held  
extending at least partially between said first and second support members at a height that is  
5 effective to engage the target vehicle as said target vehicle passes between the support members  
and having:

an upper barrier member (22) extending generally horizontally across the  
pathway when the device is in the deployed condition;

a lower barrier member (24) extending generally horizontally across the pathway  
10 when the device is in the deployed condition;

a plurality of linking members (26, 28A, 28B, 30A, 30B) extending between the  
upper and lower barrier members and coupled to the upper and lower members effective  
to transfer a restraining force applied to at least one of the upper and lower members to  
the vehicle when the vehicle is engaged to the flexible barrier,

15 wherein on either side of a barrier median, in at least an area starting about a foot (0.3 m)  
from the median and continuing to at least about four feet (1.2 m) from the median measured  
along the lower barrier member, any of the linking members extend between the upper and  
lower barrier members other than parallel to the median and leave one or more large gaps in the  
barrier effective so that a vehicle tire overriding the lower barrier member and any lower portion  
20 of any linking member will encounter such a gap and, thereby be unable to draw the barrier  
beneath the vehicle to drive over the barrier.

2. The device of claim 1 wherein along said area any linking members extend outward from  
the median from the lower barrier member to the upper barrier member.

3. The device of claim 1 wherein said linking members include:

a median member (26) extending along the median;  
a pair of left and right inboard members (28A, 28B); and  
a pair of left and right outboard members (30A, 30B),

5. wherein along the lower barrier member (24) each inboard member is separated from its  
associated outboard member by a gap of at least 2 feet (0.6 m).

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 January 2001 (11.01.2001)

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(10) International Publication Number  
**WO 01/02648 A3**

(51) International Patent Classification<sup>7</sup>: **E01F 13/00.**  
15/00, E04H 17/00, E06B 11/00

(21) International Application Number: **PCT/US00/18423**

(22) International Filing Date: **5 July 2000 (05.07.2000)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
60/142,365 **6 July 1999 (06.07.1999) US**

(71) Applicant (for all designated States except US): **PRIMEX TECHNOLOGIES, INC. [US/US]; 10101 9th Street North, St. Petersburg, FL 33716-3807 (US).**

(72) Inventors; and

(75) Inventors/Applicants (for US only): **OUSTERHOUT, John, N. [US/US]; 523 8th Street North, Wilson Creek, WA 98860 (US). TACKE, Kenneth, L. [US/US]; 23621 77th Avenue SE, Woodinville, WA 98072 (US).**

(74) Agents: **SLATE, William, B. et al.; Wiggin & Dana, One Century Tower, New Haven, CT 06508-1832 (US).**

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

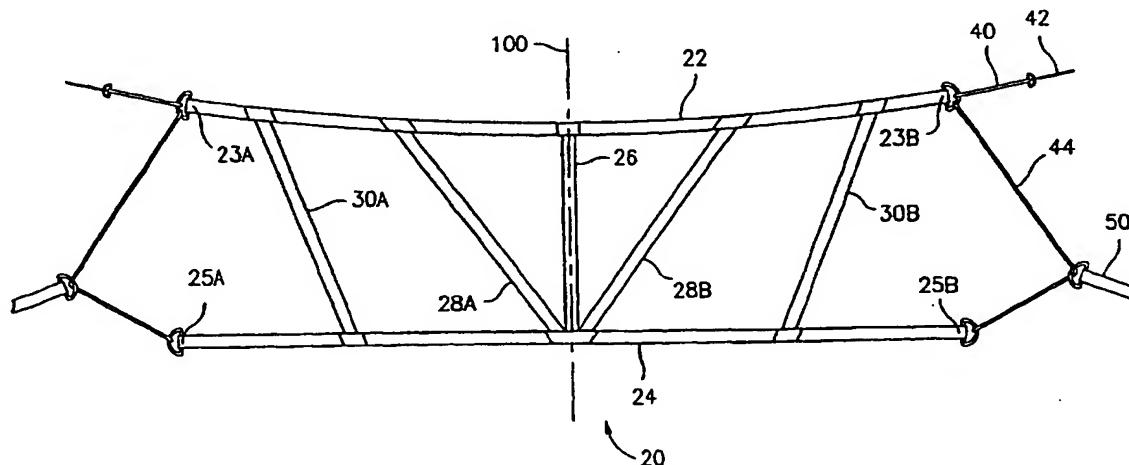
Published:

— *With international search report.*

(88) Date of publication of the international search report:  
**3 May 2001**

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **VEHICLE CAPTURE BARRIER**



**WO 01/02648 A3**

(57) Abstract: A vehicle barrier (20) is constructed to minimize chances of being pulled over or drawn under a vehicle impacting the barrier. The provision of large gaps in the barrier both increases the likelihood of the barrier grabbing onto a portion of the vehicle which might not be achieved by a barrier having a very small mesh. The barrier members (28A, 28B, 30A, 30B) which bound these gaps are constructed at particular angles so that a vehicle tire encountering the barrier would be neither able to run up a given member or run from member to member so as to draw the barrier under the vehicle and allow the vehicle to drive over the barrier. Rather, the tires ultimately encounter the gaps and, thereafter, do not draw the barrier beneath the vehicle.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/18423

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E01F 13/00, 15/00; E04H 17/00; E06B 11/00  
 US CL : 404/6; 256/1, 13.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 404/6; 256/1, 13.1; 49/131, 133

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	US 5,993,104 A (MARCOTULLIO et al.) 30 NOVEMBER 1999 (30/11/1999), see entire document.	1-16
X	US 5,829,912 A (MARCOTULLIO et al.) 03 NOVEMBER 1998 (03/11/1998), see entire document.	1-16
X	US 2,465,936 A (SCHULTZ) 29 MARCH 1949 (29/03/1949), see entire document.	1-6, 10, 13, 15, 16
X	US 2,450,328 A (COTTON) 28 SEPTEMBER 1948 (28/09/1948), see entire document.	1-6, 10, 13, 15, 16
X	US 2,440,574 A (COTTON) 27 APRIL 1948 (27/04/1948), see entire document.	1-6, 10, 13, 15, 16
A	US 5,624,203 A (JACKSON et al.) 29 APRIL 1997 (29/04/1997), see entire document.	1
A	US 2,237,106 A (MINERT) 01 APRIL 1941 (01/04/1941), see entire document.	1
A	US 1,929,859 A (STRAUSS) 10 OCTOBER 1933 (10/10/1933), see Figures 1 and 2.	1
A	US 5,054,237 A (KAPALA et al.) 08 OCTOBER 1991 (08/10/1991), see entire document.	11, 12
A	US 4,893,119 A (NASATKA) 09 JANUARY 1990 (09/01/1990), see entire document.	11, 12
A	US 4,715,742 A (DICKINSON) 29 DECEMBER 1987 (29/12/1987), see Figures 1-4.	11, 12

 Further documents are listed in the continuation of Box C.

See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

11 December 2000 (11.12.2000)

Date of mailing of the international search report

17 JAN 2001

Name and mailing address of the ISA/US

 Commissioner of Patents and Trademarks  
 Box PCT  
 Washington, D.C. 20231

Authorized officer

Gary Hartmann *Diane Smith f*

Facsimile No. (703)305-3230

Telephone No. 703-305-4549